

WHAT IS CLAIMED IS:

1. An electronic component mounting apparatus comprising:
a component feeding unit feeding an electronic component;
5 a suction nozzle picking up the electronic component from the component feeding unit
and mounting the electronic component on a printed board; and
a position sensor measuring a vertical position of a lower end of the suction nozzle after
the suction nozzle releases the electronic component to the printed board.
- 10 2. The electronic component mounting apparatus of claim 1, further comprising a drive
source moving the suction nozzle vertically and a control device determining a range of a
vertical movement of the suction nozzle based on the vertical position of the lower end of the
suction nozzle measured by the position sensor.
- 15 3. The electronic component mounting apparatus of claim 1, further comprising a
decision device judging that the suction nozzle holds the electronic component when the vertical
position of the lower of the suction nozzle measured by the position sensor is lower than a
predetermined position.
- 20 4. The electronic component mounting apparatus of claim 1, further comprising a
decision device judging that the suction nozzle is about to fall when the vertical position of the
lower of the suction nozzle measured by the position sensor is lower than a predetermined
position.
- 25 5. The electronic component mounting apparatus of claim 1, further comprising a
decision device judging that the suction nozzle is missing when the vertical position of the lower
of the suction nozzle measured by the position sensor is higher than a predetermined position.
- 30 6. The electronic component mounting apparatus of claim 1, wherein the position
sensor comprises a line sensor.

7. An electronic component mounting apparatus comprising:
a plurality of component feeding units feeding electronic components;
a plurality of suction nozzles provided on a mounting head for picking up the electronic components from the component feeding units and mounting the electronic components on a

5 printed board;

a line sensor unit comprising a first light source and a light receiving device, the line sensor being configured to measure a vertical position of a lower end of each of the suction nozzles after the suction nozzles release the electronic components to the printed board;

a second light source provided in the line sensor unit in addition to the first light source;

10 and

a decision device judging that a suction nozzle is about to fall when an amount of light received by the light receiving device from the first and second light sources is below a predetermined amount.

15 8. The electronic component mounting apparatus of claim 7, wherein the decision device does not judge the suction nozzles that are mounted on the mounting head and have mounted at least one electric component on the printed board.

20 9. The electronic component mounting apparatus of claim 7, further comprising a nozzle select and switch device replacing a suction nozzle used in a first mounting operation with a suction nozzle selected for a second mounting operation, wherein the decision device does not judge the suction nozzles that are selected by the nozzle selection and switch device and mounted on the mounting head.